

1. A transformer comprising:

a substrate comprising a semiconductor material;

a first conductor over the substrate, the first conductor defining a generally spiral-shaped signal path having at least one turn;

a second conductor over the substrate, the second conductor defining a generally spiral-shaped signal path having at least one turn; and

a magnetic layer over the substrate.

2. The transformer of claim 1, wherein the magnetic layer comprises cobalt.

3. The transformer of claim 1, wherein the magnetic layer comprises an amorphous alloy comprising cobalt.

4. The transformer of claim 1, wherein the magnetic layer comprises an amorphous alloy comprising cobalt and zirconium.

5. The transformer of claim 1, wherein the magnetic layer comprises an amorphous alloy comprising cobalt; zirconium; and tantalum, niobium, or a rare earth element.

6. The transformer of claim 1, wherein the second conductor lies over the first conductor.

7. The transformer of claim 6, wherein the magnetic layer lies between the substrate and the first conductor, between the first and second conductors, or over the second conductor.

8. The transformer of claim 6, wherein the first conductor lies over the magnetic layer; and wherein the transformer comprises another magnetic layer between the first and second conductors.

9. The transformer of claim 8, comprising another magnetic layer over the second conductor.

10. The transformer of claim 6, wherein the first conductor lies over the magnetic layer; and wherein the transformer comprises another magnetic layer over the second conductor.

11. The transformer of claim 6, wherein the magnetic layer lies between the first and second conductors; and wherein the transformer comprises another magnetic layer over the second conductor.

12. The transformer of claim 1, wherein the first and second conductors are positioned side-by-side.

13. The transformer of claim 12, wherein the first and second conductors each lie over the magnetic layer.

14. The transformer of claim 13, comprising another magnetic layer over the first and second conductors.

15. The transformer of claim 12, wherein the magnetic layer lies over the first and second conductors.

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16. The transformer of claim 1, wherein the first and second conductors are positioned such that at least a portion of one or more turns of the first conductor are each positioned adjacent to an inner side of at least a portion of one turn of the second conductor.

17. The transformer of claim 16, wherein the first and second conductors each lie over the magnetic layer.

18. The transformer of claim 17, comprising another magnetic layer over the first and second conductors.

19. The transformer of claim 16, wherein the magnetic layer lies over the first and second conductors.

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A method comprising:

forming a first conductor over a substrate comprising a semiconductor material, wherein the forming the first conductor comprises forming the first conductor such that the first conductor defines a generally spiral-shaped signal path having at least one turn;

forming a second conductor over the substrate such that the second conductor defines a generally spiral-shaped signal path having at least one turn; and

forming a magnetic layer over the substrate.

21. The method of claim 20, wherein the forming the magnetic layer comprises forming a magnetic layer comprising cobalt.

22. The method of claim 20, wherein the forming the magnetic layer comprises forming a magnetic layer comprising an amorphous alloy comprising cobalt.

23. The method of claim 20, wherein the forming the magnetic layer comprises forming a magnetic layer comprising an amorphous alloy comprising cobalt and zirconium.

24. The method of claim 20, wherein the forming the magnetic layer comprises forming a magnetic layer comprising an amorphous alloy comprising cobalt; zirconium; and tantalum, niobium, or a rare earth element.

25. The method of claim 20, wherein the forming the second conductor comprises forming the second conductor over the first conductor.

26. The method of claim 25, wherein the forming the magnetic layer comprises forming the magnetic layer between the substrate and the first conductor, between the first and second conductors, or over the second conductor.

27. The method of claim 25, wherein the forming the first conductor comprises forming the first conductor over the magnetic layer; and

wherein the method comprises forming another magnetic layer between the first and second conductors.

28. The method of claim 27, comprising forming another magnetic layer over the second conductor.

29. The method of claim 25, wherein the forming the first conductor comprises forming the first conductor over the magnetic layer; and

wherein the method comprises forming another magnetic layer over the second conductor.

30. The method of claim 25, wherein the forming the magnetic layer comprises forming the magnetic layer between the first and second conductors; and

wherein the method comprises forming another magnetic layer over the second conductor.

31. The method of claim 20, wherein the forming the first conductor and the forming the second conductor comprise forming the first and second conductors such that the first and second conductors are positioned side-by-side.

32. The method of claim 31, wherein the forming the first and second conductors comprises forming the first and second conductors over the magnetic layer.

33. The method of claim 32, comprising forming another magnetic layer over the first and second conductors.

34. The method of claim 31, wherein the forming the magnetic layer comprises forming the magnetic layer over the first and second conductors.

35. The method of claim 20, wherein the forming the first conductor and the forming the second conductor comprise forming the first and second conductors such that at least a portion of one or more turns of the first conductor are each positioned adjacent to an inner side of at least a portion of one turn of the second conductor.

36. The method of claim 35, wherein the forming the first and second conductors comprises forming the first and second conductors over the magnetic layer.

37. The method of claim 36, comprising forming another magnetic layer over the first and second conductors.

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*Claim 38*  
The method of claim 35, wherein the forming the magnetic layer comprises forming the magnetic layer over the first and second conductors.

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39. A transformer comprising:

    a substrate comprising a semiconductor material;

    a conductor over the substrate, the conductor defining a generally spiral-shaped signal path having at least one turn;

    a voltage tap conductively coupled to the conductor at a node between end nodes of the conductor; and

    a magnetic layer over the substrate.

40. The transformer of claim 39, wherein the magnetic layer comprises an amorphous cobalt alloy.

41. The transformer of claim 39, wherein the conductor lies over the magnetic layer.

42. The transformer of claim 41, comprising another magnetic layer over the conductor.

43. The transformer of claim 39, wherein the magnetic layer lies over the conductor.

44. A method comprising:

forming a conductor over a substrate comprising a semiconductor material, wherein the forming the conductor comprises forming the conductor such that the conductor defines a generally spiral-shaped signal path having at least one turn;

tapping a voltage potential from the conductor at a node between end nodes of the conductor; and

forming a magnetic layer over the substrate.

45. The method of claim 44, wherein the forming the magnetic layer comprises forming the magnetic layer with a magnetic material comprising an amorphous cobalt alloy.

46. The method of claim 44, wherein the forming the conductor comprises forming the conductor over the magnetic layer.

47. The method of claim 46, comprising forming another magnetic layer over the conductor.

48. The method of claim 44, wherein the forming the magnetic layer comprises forming the magnetic layer over the conductor.